

support material 2 all have equal surface areas, but they can also be formed such that the surface area of the thin-film layers of photocatalytic material 1 becomes larger going from the surface toward the lower layers, as shown in FIG. 4(a). Or, they can also be formed such that the surface area becomes smaller going from the surface toward the lower layers, as shown in FIG. 4(c). Note that for the sake of comparison, FIG. 4(b) shows the photocatalytic colored body 3 of FIG. 1(b) above. Note that such laminates may be provided over the entire surface of the substrate, or only a single one may also be disposed.

IN THE CLAIMS

Please amend the claims as follows:

Please delete Claims 1-49.

Please add the following Claims 50-95:

50. (New) A photocatalytic member having photocatalytic and color forming properties; said member comprising:

a substrate; and
a laminate deposited on the substrate, which laminate has a plurality of thin-film photocatalytic layers and a plurality of thin-film support layers;
wherein the plurality of thin-film photocatalytic layers and the plurality of thin-film support layers alternate with each other and contact sequentially at surface areas each smaller than the area of the contacted thin-film photocatalytic layer, leaving a space between adjacent photocatalytic layers and next to a support layer, said space being open to the outside of said member, the thin-film photocatalytic layer nearest the substrate being the lowermost of said thin-film photocatalytic layers, the remaining layers being sequentially more distant from the substrate.

51. (New) The photocatalytic member according to Claim 50, further comprising an opening on a surface of said member and through a thin-film photocatalytic layer, and wherein a space communicates with the opening in order to be open to the outside of said member by way of the opening.

52. (New) The photocatalytic member according to Claim 50, wherein said plurality of thin-film photocatalytic layers are made of titanium dioxide.

53. (New) The photocatalytic member according to Claim 50, wherein said plurality of thin-film support layers are made of one member selected from the group consisting of metals with a melting point of 400°C or higher, semiconductors and insulators.

54. (New) The photocatalytic colored member according to Claim 51, wherein said openings are shaped like parallel grooves.

55. (New) The photocatalytic member according to Claim 51, wherein said opening is circular, elliptical or polygonal.

56. (New) The photocatalytic member according to Claim 51, wherein said opening comprises a plurality of openings disposed at uniform intervals.

57. (New) The photocatalytic colored member according to Claim 51, wherein said opening comprises a plurality of openings disposed at nonuniform intervals.

58. (New) The photocatalytic member according to Claim 51, wherein said plurality of thin-film support layers are disposed at a center of said spaces to support the thin-film catalytic layers and maintain said spaces and each support layer has a circular, elliptical or polygonal cross section when viewed from the surface of said member, and said laminate is deposited on a portion or an entire surface of the substrate.

59. (New) The photocatalytic colored member according to Claim 50, wherein the surface areas of the layers of said laminated thin-film layers of photocatalytic material are equal to each other.

60. (New) The photocatalytic colored member according to Claim 51, wherein the surface areas of the layers of said laminated thin-film layers of photocatalytic material are equal to each other.

61. (New) The photocatalytic member according to Claim 50, wherein said plurality of thin-film photocatalytic layers have surface areas becoming larger toward the lowermost thin-film photocatalytic layer.

62. (New) The photocatalytic member according to Claim 51, wherein said plurality of thin-film photocatalytic layers have surface areas becoming larger toward the lowermost thin-film photocatalytic layer.

63. (New) The photocatalytic colored member according to Claim 50, wherein said plurality of thin-film photocatalytic layers have surface areas becoming smaller toward the lowermost thin-film photocatalytic layer.

64. (New) The photocatalytic colored member according to Claim 51, wherein said plurality of thin-film photocatalytic layers have smaller areas becoming smaller toward the lowermost thin-film photocatalytic layer.

65. (New) The photocatalytic member according to Claim 50, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an anatase structure.

66. (New) The photocatalytic member according to Claim 51, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an anatase structure.

67. (New) The photocatalytic member according to Claim 52, wherein said titanium dioxide has an anatase structure.

68. (New) The photocatalytic member according to Claim 53, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an anatase structure.

69. (New) The photocatalytic colored member according to Claim 54, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an anatase structure.

70. (New) The photocatalytic colored member according to Claim 55, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an anatase structure.

71. (New) The photocatalytic colored member according to Claim 56, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an anatase structure.

72. (New) The photocatalytic colored member according to Claim 57, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an anatase structure.

73. (New) The photocatalytic colored member according to Claim 58, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an anatase structure.

74. (New) The photocatalytic colored member according to Claim 59, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an anatase structure.

75. (New) The photocatalytic colored member according to Claim 60, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an anatase structure.

76. (New) The photocatalytic colored member according to Claim 61, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an anatase structure.

77. (New) The photocatalytic colored member according to Claim 62, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an anatase structure.

78. (New) The photocatalytic colored member according to Claim 63, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an anatase structure.

79. (New) The photocatalytic colored member according to Claim 64, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an anatase structure.

80. (New) The photocatalytic colored member according to Claim 50, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an amorphous structure.

81. (New) The photocatalytic colored member according to Claim 51, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an amorphous structure.

82. (New) The photocatalytic colored member according to Claim 52, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an amorphous structure.

83. (New) The photocatalytic colored member according to Claim 53, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an amorphous structure.

84. (New) The photocatalytic colored member according to Claim 54, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an amorphous structure.

85. (New) The photocatalytic colored member according to Claim 55, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an amorphous structure.

86. (New) The photocatalytic colored member according to Claim 56, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an amorphous structure.

87. (New) The photocatalytic colored member according to Claim 57, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an amorphous structure.

88. (New) The photocatalytic colored member according to Claim 58, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an amorphous structure.

89. (New) The photocatalytic colored member according to Claim 59, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an amorphous structure.

90. (New) The photocatalytic colored member according to Claim 60, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an amorphous structure.

91. (New) The photocatalytic colored member according to Claim 61, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an amorphous structure.

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92. (New) The photocatalytic colored member according to Claim 62, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an amorphous structure.

93. (New) The photocatalytic colored member according to Claim 63, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an amorphous structure.

94. (New) The photocatalytic colored member according to Claim 64, wherein said plurality of thin-film photocatalytic layers are made of titanium oxide with an amorphous structure.

95. (New) A photocatalytic colored member according to Claim 50, wherein the thickness of the thin-film photocatalytic layers and of the spaces between them are such that their optical thicknesses are $\lambda/4$ where λ is the central wavelength of the desired light to be emitted.

IN THE ABSTRACT OF THE DISCLOSURE

Please replace the abstract of the disclosure with the following abstract.

ABSTRACT OF THE DISCLOSURE

A photocatalytic colored member includes a laminate formed by laminating a plurality of thin-film layers of photocatalytic material and a plurality of thin-film layers of support material alternating therewith, with vacant layers on spaces formed next to the support material layers such that they are open to the outside of said member, optionally including openings in the laminate structure.